

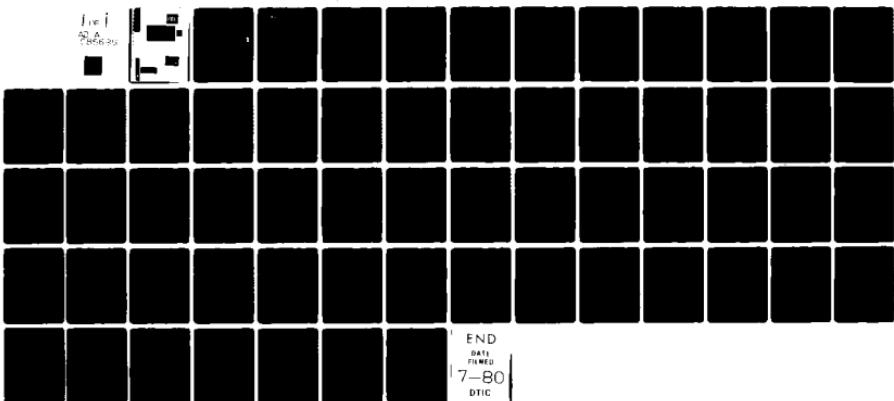
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A SYSTEM APPROACH TO NAVY MEDICAL EDUCATION AND TRAINING. APPENDIX ETC(U)
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APPENDIX 9.

LABORATORY TECHNICIAN



APPLICATION OF A SYSTEM APPROACH
U.S. NAVY MEDICAL DEPARTMENT
EDUCATION AND TRAINING PROGRAMS
FINAL REPORT

Prepared under Contract to
OFFICE OF NAVAL RESEARCH
U.S. DEPARTMENT OF THE NAVY

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Program Manager
Education and Training R&D
Bureau of Medicine and Surgery (Code 71G)

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Medical Technician Job Analysis Task Analysis Curriculum Development		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The study objective consisted of a determination of what the health care personnel in the Navy's Medical Department, Bureau of Medicine and Surgery actually do in their occupations; improving the personnel process (education and training); and building a viable career pathway for all health care personnel. Clearly the first task was to develop a system of job analyses applicable to all system wide health care manpower tasks. A means of postulating simplified occupational clusters covering some 50		

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currently designated Navy enlisted occupations, 20 Naval Enlisted Classification Codes (NEC's) were computerized. A set of 16 groupings that cover all designated occupations was developed so as to enhance the effectiveness of professionals and sub-professionals alike.

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FOREWORD

The project, "Application of a System Approach to the Navy Medical Department Education and Training Programs," was initiated in May of 1969 as a realistic, comprehensive response to certain objectives set forth in ADO 43-03X, and to memoranda from both the Secretary of Defense and the Assistant Secretary of Defense, Manpower and Reserve Affairs. The Secretary's concern was stated in his memorandum of 29 June 1965, "Innovation in Defense Training and Education." More specific concerns were stated in the Assistant Secretary's memorandum of 14 June 1968, "Application of a System Approach in the Development and Management of Training Courses." In this he called for "vigorous and imaginative effort," and an approach "characterized by an organized training program with precise goals and defined operational interrelation among instructional system components." He also noted, "Job analyses with task descriptions expressed in behavioristic terms are basic and essential to the development of precise training goals and learning objectives."

The Project

System survey and analysis was conducted relative to all factors affecting education and training programs. Subsequently, a job-analysis sub-system was defined and developed incorporating a series of task inventories "...expressed in behavioristic terms..." These inventories enabled the gathering of job activity data from enlisted job incumbents, and data relating to task sharing and delegation from officers of the Medical, Nurse and Dental Corps. A data management sub-system was devised to process incumbent data, then carry out needed analyses. The development of initial competency curricula based upon job analysis was implemented to a level of methodology determination. These methods and curriculum materials constituted a third (instructional) sub-system.

Thus, as originally proposed, a system capability has been developed in fulfillment of expressed need. The system, however, remains untested and unevaluated. ADO 43-03X called for feasibility tests and cost-effectiveness determination. The project was designed to so comply. Test and evaluation through the process of implementation has not proved feasible in the Navy Medical Department within the duration of the project. As designed and developed the system does have "...precise goals and defined operational interrelation among instructional system components." The latter has been achieved in terms of a recommended career structure affording productive, rewarding manpower utilization which bridges manpower training and health care delivery functions.

Data Management Sub-System

Job analysis, involving the application of comprehensive task inventories to thousands of job incumbents, generates many millions of discrete bits of response data. They can be processed and manipulated only by high speed computer capability using rigorously designed specialty programs. In addition to numerical data base handling, there is the problem of rapidly and accurately manipulating a task statement data base exceeding ten thousand carefully phrased behavioral statements. Through the use of special programs, task inventories are prepared, printouts for special purposes are created following a job analysis application, access and retrieval of both data and tasks are efficiently and accurately carried out, and special data analyses conducted. The collective programs, techniques and procedures comprising this sub-system are referred to as the Navy Occupational Data Analysis Language (NODAL).

Job Analysis Sub-System

Some twenty task inventory booklets (and associated response booklets) were the instruments used to obtain job incumbent response data for more than fifty occupations. An inventory booklet contains instructions, formatted questions concerning respondent information ("bio-data"), response dimension definitions, and a list of tasks which may vary in number from a few hundred to more than a thousand per occupational field.

By applying NODAL and its associated indexing techniques, it is possible to assemble modified or completely different inventories than those used in this research. Present inventories were applied about three years ago. While they have been rendered in operational format, they should not be re-applied until their task content is updated.

Response booklets were designed in OPSCAN mode for ease of recording and processing responses.

Overall job analysis objectives and a plan of administration were established prior to inventory preparation, including the setting of provisional sample target sizes. Since overall data attrition was forecast to approximate twenty percent, final sample and sub-sample sizes were adjusted accordingly. Stratified random sampling techniques were used. Variables selected (such as rating, NEC, environment) determined stratifications, together with sub-population sizes. About fifteen percent of large sub-populations were sought while a majority or all members of small sub-populations were sought.

Administration procedures were established with great care for every step of the data collecting process, and were coordinated with sampling and data analysis plans. Once set, the procedures were formalized as a protocol and followed rigorously.

Instructional Sub-System

Partial "competency curricula" have been composed as an integral sub-system bridging what is required as performance on the job with what is, accordingly, necessary instruction in the training process. Further, curriculum materials were developed to meet essential requirements for implementing the system so that the system could be tested and evaluated for cost effectiveness. However, due to the fact that test and evaluation was not feasible in the Navy Medical Department within the duration of the project, it was not possible to complete the development of the system through the test and evaluation phase. The inability to complete this phase also interrupted the planned process for fully developing the curricula; therefore, instead of completed curricula ready for use in the system, the curricula were partially developed to establish the necessary sub-system methodology. The competency curricula are based on tasks currently performed by job incumbents in 1971. (The currency of a given curriculum depends upon periodic analysis of incumbents' jobs, and its quality control resides in the evaluation of the performance competency of the program's graduates.)

A competency curriculum provides a planned course of instruction or training program made up of sequenced competency units which are, in turn, comprised of sequenced modules. These modules, emphasizing performance objectives, are the foundation of the curriculum.

A complete module would be comprised of seven parts: a cluster of related tasks; a performance objective; a list of knowledges and skills implied by the objective; a list of instructional strategies for presenting the knowledges and skills to the learner; an inventory of training aids for supporting the instructional strategies; a list of examination modes; and a statement of the required training time. In this project, curriculum materials have been developed to various levels of adequacy, and usually comprise only the first three parts; the latter four need to be prepared by the user.

The performance objective, which is the most crucial part of the module, is the basis for determining curriculum content. It is composed of five essential elements: the stimulus which initiates the behavior; the behavior; the conditions under which the behavior takes place; the criteria for evaluating the behavior; and the consequence or results of the behavior. A sixth element, namely next action, is not essential; however, it is intended to provide linkage for the next behavior.

Knowledges and skills listed in the module are those needed by the learner for meeting the requirements of the performance objective.

Instructional strategies, training aids, examination modes and training time have been specified only for the Basic Hospital Corps Curriculum. The strategies, aids and modes were selected on the basis of those considered to be most supportive in presenting the knowledges and skills so as to provide optimum learning effectiveness and training efficiency. The strategies extend from the classroom lecture as traditionally presented by a teacher to the more sophisticated mediated program for self-instruction. The training aids, like strategies, extend from the traditional references and handout material in the form of a student syllabus to mediated programs for self-instruction supported by anatomical models. Examination modes extend from the traditional paper and pencil tests to proficiency evaluation of program graduates on the job, commonly known as feedback. Feedback is essential for determining learning effectiveness and for quality control of a training program. The kind of instructional strategies, training aids and examination modes utilized for training are limited only by such factors as staff capability and training budget.

The training time specified in the Basic Hospital Corps Curriculum is estimated, based upon essential knowledge and skills and program sequence.

The competency curriculum module, when complete, provides all of the requirements for training a learner to perform the tasks set forth in the module. A module may be used independently or related modules may be re-sequenced into modified competency units to provide training for a specific job segment.

Since the curricula are based upon tasks performed by job incumbents in 1971, current analysis of jobs needs to be accomplished using task inventories that have been updated to reflect changes in performed tasks. Subsequent to job analysis, a revision of the curricula should be accomplished to reflect task changes. When the foregoing are accomplished, then faculty and other staff members may be indoctrinated to the competency curricula and to their relationship to the education and training system.

In addition to the primary use for the systematic training of job incumbents, these curricula may be used to plan for new training programs, develop new curricula, and revise existing curricula; develop or modify performance standards; develop or modify proficiency examinations; define billets; credentialize training programs; counsel on careers; select students; and identify and select faculty.

The System

Three sub-systems, as described, comprise the proposed system for Education and Training Programs in The Navy Medical Department. This exploratory and advanced developmental research has established an overall methodology for improved education and training incorporating every possible means of providing bases for demonstrating feasibility and cost effectiveness. There remains only job analysis sub-system updating, instructional sub-system completion, and full system test and evaluation.

Acknowledgements

The authors wish to acknowledge the invaluable participation of the several thousands of Naval personnel who served as respondents in inventory application. The many military and civilian personnel who contributed to developmental efforts are cited by name in the Final Report.

The authors also wish to acknowledge former colleagues for singularly important contributions, namely, Elias H. Porter, Ph.D., Carole K. Kauffman, R.N., M.P.H., Mary Kay Munday, B.S.N., R.N., Gail Zarren, M.S.W., and Renee Schick, B.A.

Identity and acknowledgement of the project Advisory Group during the project's final year is recorded in the Final Report.

Lastly, the project could not have been commenced nor carried out without the vision, guidance and outstanding direction of Ouida C. Upchurch, Capt., NC, USN, Project Manager.

NAVY MEDICAL DEPARTMENT

TASK INVENTORY BOOKLET

LABORATORY

CONSTRAINTS AND ETHICAL USE

This task inventory was developed three years ago in a first-version key punch format for education and training research purposes.

The present "operational" format, using a mark-sense response booklet (Opscan), is recommended for future applications. The task and equipment statements comprising the bulk of the inventory are precisely the same (less duplicate entries) as in the original research tools but rearranged for Opscan mode. Biographical data questions have also been reformatted for Opscan (NEC codes should be updated).

The processing, administering and formatting of this inventory have thus been readied for operational application.

It is strongly recommended that this inventory be updated in its task and equipment statement sections before actual operational use. These reasons pertain:

- Changes in medical or related procedures or techniques
- Some tasks may violate current policy or be obsolete
- Equipment changes may have occurred
- The objective of task comprehensiveness may change
- Objectives may shift to embrace manpower utilization as well as education and training

In the latter regard, the present operational format includes a "time to perform" dimension (as well as frequency of performance and two additional optional blank response dimension fields). As a response dimension, "time to perform" has been validated within the context of inventories for professional personnel where the objectives embraced utilization (i.e., time associated with shared and delegable tasks). The original Enlisted inventory content was directed to education and training factors only. If "time to perform" is to be used operationally, each task and equipment statement should be examined by expert job incumbents to remove possible overlaps which could confound "time to perform" data. This review process would also serve other purposes cited above.

A general precaution is in order.

When task analysis inventories are poorly prepared, loosely administered, administered according to less than rigorous sampling, or are handled casually in processing or interpretation, they will inevitably produce poor or questionable data, at best. At worst, such practices will result in loss of money and time, and produce dangerous data. Inventories should be prepared, applied, processed and interpreted only by knowledgeable professional and technical personnel. As in the cases of ethically controlled behavior tests, inventories should not be casually copied or distributed, and should remain under the control of authorized, trained personnel. Factors effecting reliability and validity should be fully appreciated.

GENERAL INSTRUCTIONS

There are two parts to be completed for this survey:

Part I	Career Background Information (answers to be recorded in this TASK BOOKLET)
Part II A	List of Tasks (answers to be recorded on the accompanying RESPONSE BOOKLET)
B	List of Instruments and Equipment (answers to be recorded on the accompanying RESPONSE BOOKLET)

Each part is preceded by a set of instructions. Be sure to read them carefully before you start answering each part. All instructions are found on the tinted pages.

PLEASE USE ONLY NUMBER 2 LEAD PENCILS. ERASE ALL CHANGES CAREFULLY AND COMPLETELY. DO NOT PUT ANY MARKS OTHER THAN YOUR ANSWERS ON EACH RESPONSE PAGE.

DO NOT FOLD, WRINKLE, CREASE OR DETACH PAGES
FROM EITHER TASK BOOKLET OR RESPONSE BOOKLET.

WHEN RECORDING YOUR ANSWERS YOU MAY WANT TO USE A RULER TO READ ACROSS ANSWER AND QUESTION COLUMNS.

WHEN YOU HAVE COMPLETED YOUR RESPONSES, PUT THE TASK INVENTORY BOOKLET AND THE RESPONSE BOOKLET IN THE ENCLOSED SELF-ADDRESSED ENVELOPE. SEAL AND RETURN TO THE OFFICER WHO GAVE YOU THIS PACKAGE. COMPLETED BOOKLETS SHOULD BE RETURNED WITHIN ONE WEEK OF RECEIPT.

DO NOT FILL IN

Part I

CAREER BACKGROUND INFORMATION

Check that the Form and Serial Number in this box match those on the cover of this Booklet

N _____
Form _____ Serial No. _____
↑

(1)

(7)

Please fill out completely

Name of your Duty Station _____

City & State (if applicable) _____

Your Name _____

Social Security Number _____

(14)

PLEASE ANSWER QUESTIONS BELOW BY ENTERING THE PROPER NUMBER IN THE BLANKS PROVIDED. TWO BLANKS REQUIRE A TWO-DIGIT ANSWER. DISREGARD NUMBERS IN PARENTHESIS.

ENTER
ANSWERS
HERE

Q1. Select the number to indicate the Corps to which you belong:

1. Dental Technician
2. Hospital Corps

Q1. _____ (23)

Q2. Indicate your military status:

1. USN
2. USNR

Q2. _____ (24)

Q3. Indicate your pay grade:

1. E1	6. E6
2. E2	7. E7
3. E3	8. E8
4. E4	9. E9
5. E5	

Q3. _____ (25)

Q4. Indicate your total years of active duty in the Navy to date: (estimate to the nearest year)

1. Less than 2 years
2. 2 to 4 years
3. 5 to 8 years
4. More than 8 years

Q4. _____ (26)

Q5. Select the number to indicate your present immediate supervisor:

1. Physician
2. Dentist
3. Nurse
4. MSC Officer
5. HM or DT
6. Other (Specify) _____

Q5. ____ (27)

Q6. Select the number to indicate the average number of hours you work per week: (estimate to the nearest hour)

1. 35 to 40 hours
2. 41 to 50 hours
3. More than 50 hours

Q6. ____ (28)

Q7. Please give an estimate of the percent of time you spend on the following (write five percent as 05):

1. Inpatient care
2. Outpatient care
3. Teaching
4. Administration
5. Other (specify) _____

Q7.

1. ____ % (29)
2. ____ % (31)
3. ____ % (33)
4. ____ % (35)
5. ____ % (37)

Q8. Assuming that most or all of the following factors are of importance to you, select the three which, if improved, would contribute most to your job satisfaction:

- 01 Salary and/or promotion opportunities
- 02 Retirement benefits
- 03 Housing
- 04 Educational advancement opportunities
- 05 Stability of tour of duty
- 06 Physical facilities and equipment
- 07 Administrative and clerical support
- 08 Work load
- 09 Personal career planning
- 10 Opportunity to attend professional meetings

Q8. ____ (39)
____ (41)
____ (43)

Q9. Using the list on page vii specify your current NEC by writing the last two digits of the CODE.

Q9. ____ (45)

Q10. Select the number to indicate your years of experience corresponding to the NEC stated in Q9: (estimate to the nearest year)

1. Less than 1 year	4. 6 to 10 years
2. 1 to 2 years	5. 11 to 15 years
3. 3 to 5 years	6. More than 15 years

Q10. ____ (47)

Q11. If you have other NEC(s) in addition to the one specified in Q9, check page vii and indicate the last two digits of the CODE(s). If you have none, enter "99" in answer space for Q11 and Q12.

Q11a. ____ (48)
b. ____ (50)

Q12. Select the number to indicate the years of experience you had in the NEC(s) stated in Q11 (estimate to the nearest year).

Q12a. ____ (52)
b. ____ (53)

1. Less than 1 year	4. 6 to 10 years
2. 1 to 2 years	5. 11 to 15 years
3. 3 to 5 years	6. More than 15 years

Q13. From the list below, write the two-digit CODE to indicate the specialty of the department in which you are currently functioning.

Q13. ____ (54)

CODE

01	Administration	18	Urology
02	Education	19	Intensive Care
03	Anesthesiology	20	Operating Room
04	Coronary Care	21	Emergency Room
05	Dermatology	00	Other (specify)
06	Medicine - OPD		
07	Medicine - Wards		
08	Obstetrics/Gynecology		
09	Ophthalmology		
10	Orthopedics		
11	Otolaryngology		
12	Medical Laboratory		
13	Pediatrics		
14	Psychiatry		
15	Public Health		
16	Radiology		
17	General Surgery-Wards		

ENTER
ANSWER
HERE

Q14. Select the number to indicate the type of duty station at which you currently work, and have been working for at least 30 days:

1. Hospital
2. Dispensary
3. Aboard ship/sub, no M.O. (or D.O.) aboard
4. Aboard ship/sub, M.O. (or D.O.) aboard
5. Aviation squadron/wing, Navy or Marine
6. Marine ground forces
7. Administrative Commands
8. Research Commands or PMUs
9. Dental Clinic
0. Other _____

Q15. Indicate the number of people you normally supervise:

0. None	3. 6-10
1. 1-2	4. 11-20
2. 3-5	5. over 20

Q14. _____

(56)

Q15. _____

(57)

MEDICAL/DENTAL NEC (NAVAL ENLISTED CODE) AND TITLE

0000 General Service, Hospital or Dental Corpsman
3371 Health Physics & Process Control Technician
3391 Nuclear Power Plant Operator
8402 Nuclear Submarine Medicine Technician
8403 Submarine Medicine Technician
8404 Medical Field Service Technician
8405 Advanced Hospital Corps Technician (Class B)
8406 Aviation Medicine Technician
8407 Nuclear Medicine Technician
8408 Cardiopulmonary Technician
8409 Aviation Physiology Technician
8412 Clinical Laboratory Assistant Technician
8413 Tissue Culture Technician
8414 Clinical Chemistry Technician
8415 Medical Technology Technician
8416 Radioactive Isotope Technician
8417 Clinical Laboratory Technician
8432 Preventive Medicine Technician
8433 Tissue Culture and Tissue Bank Technician
8442 Medical Administrative Technician
8452 X-ray Technician
8453 Electrocardiograph/Basal Metabolism Technician
8454 Electroencephalograph Technician
8462 Optician (General) Technician
8463 Optician Technician
8466 Physical and Occupational Technician
8472 Medical Photography Technician
8482 Pharmacy Technician
8483 Operating Room Technician
8484 Eye, Ear, Nose, & Throat Technician
8485 Neuropsychiatry Technician
8486 Urological Technician
8487 Occupational Therapy Technician
8488 Orthopedic Appliance Mechanic
8489 Orthopedic Cast Room Technician
8492 Special Operations Technician
8493 Medical Deep Sea Diving Technician
8494 Physical Therapy Technician
8495 Dermatology Technician
8496 Embalming Technician
8497 Medical Illustration Technician
8498 Medical Equipment Repair Technician
8703 DT General, Advanced
8707 DT Field Service
8713 DT Clinical Laboratory
8714 DT Research Assistant
8722 DT Administrative
8732 DT Repair
8752 DT Prosthetic, Basic
8753 DT Prosthetic, Advanced
8765 DT Maxillofacial Prosthetic

RESPONSE BOOKLET INSTRUCTIONS

- To complete Part II, you need this TASK BOOKLET and the accompanying RESPONSE BOOKLET. Record all your answers to Part II in the RESPONSE BOOKLET.
- All pages of the RESPONSE BOOKLET are machine readable. In order for responses to be properly read, please be sure to:
 1. Use a No. 2 pencil only
 2. Carefully and completely shade the number corresponding to your answer under each column.
- Complete Page 00 of the RESPONSE BOOKLET first. Follow instructions given on the page. Fill in Line 1, and Boxes 2, 3, 4, and 5. Ignore all other boxes. BE SURE TO ENTER YOUR SOCIAL SECURITY NUMBER (WRITE DOWNWARD) IN THE BLANK SPACES IN BOX 3: then darkly shade the corresponding number on each line. An example of a completed Page 00 is shown on the next page (the hand-written notes in this example are for clarification only. Please do not make similar notes on your RESPONSE BOOKLET.)
- After completing Page 00, carefully read and follow instructions given on pages x through xiv.
- PLEASE HANDLE YOUR RESPONSE BOOKLET CAREFULLY. KEEP IT CLEAN AND AWAY FROM CHEMICALS. DO NOT DETACH, FOLD, WRINKLE OR CROSS OUT ANY PAGE.

DO NOT MARK IN THESE BOXES	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9		0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9		0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9
	RESPONSE BOOKLET				
	Serial No. <u>0233</u>				

My name is

1 NAME Mary Smith*(Ignore three boxes)***INSTRUCTIONS**

1. Use No. 2 pencil **ONLY**.
2. Indicate responses with solid black mark in space provided.
3. Erase **COMPLETELY** all changes.
4. Do not detach forms from packet.
5. Answer questions 2 through 5 below.
6. See Task Statement Booklet for further instructions for completing boxes to the right.

Today is June 4, 1972
June = 06
4 = 04
1972 = 72

2	MONTH	1	0 1 2 3 4 5 6 7 8 9
TODAY'S DATE	DAY	2	0 1 2 3 4 5 6 7 8 9
	YEAR	3	0 1 2 3 4 5 6 7 8 9

My Soc. Sec. No. is
304-26-9751

3	0 1 2 3 4 5 6 7 8 9
SOCIAL SECURITY NUMBER	0 1 2 3 4 5 6 7 8 9
4	0 1 2 3 4 5 6 7 8 9
5	0 1 2 3 4 5 6 7 8 9
6	0 1 2 3 4 5 6 7 8 9
7	0 1 2 3 4 5 6 7 8 9
8	0 1 2 3 4 5 6 7 8 9
9	0 1 2 3 4 5 6 7 8 9
0	0 1 2 3 4 5 6 7 8 9
1	0 1 2 3 4 5 6 7 8 9

SEE COVER OF YOUR TASK BOOKLET Form N20, Ser. No. 0233

4	FORM	0 1 2 3 4 5 6 7 8 9
TASK BOOKLET	SERIAL NO.	0 1 2 3 4 5 6 7 8 9

My birthday is May 10, 1940
May = 05 1940 = 40

5	MONTH	1	0 1 2 3 4 5 6 7 8 9
DATE	DAY	2	0 1 2 3 4 5 6 7 8 9
	YEAR	3	0 1 2 3 4 5 6 7 8 9

TASK ANALYSIS BACKGROUND DATA SHEET

SEE TASK STATEMENT BOOKLET	6	0 1 2 3 4 5 6 7 8 9	13 0 1
	7	0 1 2 3 4 5 6 7 8 9	14 0 1
		0 1 2 3 4 5 6 7 8 9	15 0 1
		0 1 2 3 4 5 6 7 8 9	16 0 1
		0 1 2 3 4 5 6 7 8 9	17 0 1
		0 1 2 3 4 5 6 7 8 9	18 0 1
		0 1 2 3 4 5 6 7 8 9	19 0 1
		0 1 2 3 4 5 6 7 8 9	20 0 1
FOR INSTRUC TIONS TO COMPLI ANCE BOOKLET	8	0 1 2 3 4 5 6 7 8 9	21 0 1
		0 1 2 3 4 5 6 7 8 9	22 0 1
		0 1 2 3 4 5 6 7 8 9	23 0 1
		0 1 2 3 4 5 6 7 8 9	24 0 1
	9	0 1 2 3 4 5 6 7 8 9	25 0 1
		0 1 2 3 4 5 6 7 8 9	26 0 1
		0 1 2 3 4 5 6 7 8 9	27 0 1
		0 1 2 3 4 5 6 7 8 9	28 0 1
	10	0 1 2 3 4 5 6 7 8 9	29 0 1
		0 1 2 3 4 5 6 7 8 9	30 0 1
	11	0 1 2 3 4 5 6 7 8 9	31 0 1
		0 1 2 3 4 5 6 7 8 9	32 0 1
	12	0 1 2 3 4 5 6 7 8 9	33 0 1
		0 1 2 3 4 5 6 7 8 9	34 0 1

(Ignore these boxes)

PART II

PART II A LIST OF TASKS

PART II B LIST OF INSTRUMENTS AND EQUIPMENT

HOW TO RESPOND TO TASK STATEMENTS AND INSTRUMENTS

Your responses to each statement should be marked on the corresponding page, column and item number in your RESPONSE BOOKLET.

Note that each page in your RESPONSE BOOKLET has two response blocks. The left-hand block (items 1-25) is for entering responses to statements printed on LEFT pages of this TASK BOOKLET; the right-hand block (items 26-50) is for the responses to statements printed on RIGHT pages. Make sure that your answers are recorded in the appropriate block on every page. DO NOT MAKE ANY MARKS OTHER THAN YOUR ANSWERS!

Each time you start a new page in your RESPONSE BOOKLET, check the page on your TASK BOOKLET. See that the numbers match; then mark the page number in "Box X" in the response page (see instructions at the top of response page.) This is necessary for computer processing.

Tear the Response Guide (p. xiii) at the perforation, and use the correct side to respond to each task or instrument found on the following white pages. Note the following detailed explanation of responses.

Column A - (the responses to Column A differ for Part II A and Part II B, be sure to use the appropriate set of responses.)

Part II A

How often did you do this task within the last month?
(If you were on leave, consider your immediate past working month.)

- 0 = Did not do
- 1 = Did less than 5 times
- 2 = Did 5 to 20 times
- 3 = Did 21 to 50 times
- 4 = Did 51 to 100 times
- 5 = Did more than 100 times

Part II B

How often did you use this instrument or piece of equipment within the last month? (If you were on leave, consider your immediate past working month.)

- 0 = Did not use
- 1 = Used less than 5 times
- 2 = Used 5-20 times
- 3 = Used 21-50 times
- 4 = Used 51-100 times
- 5 = Used more than 100 times

If answer in Column A is 0, go to the next statement. If answer is 1, 2, 3, 4 or 5, answer also Columns B, C & D.

Column B

Indicate the approximate time you spent on a single performance the last time you performed this task.

0 = less than one minute

1 = 1 to 4 minutes

2 = 5 to 10 minutes

3 = 11 to 20 minutes

4 = 21 to 30 minutes

5 = 31 to 60 minutes

6 = 1 to 2 hours

7 = more than 2 hours

Column C

Do you feel you need additional training to perform this task?

0 = No

1 = Yes

RESPONSE GUIDE

(DO NOT LOSE THIS TAB)

HOW TO RESPOND TO PART IIIA - LIST OF TASKS

xii ANSWER COL. A FIRST. IF A = 0, GO TO NEXT STATEMENT: IF A = 1-5, ANSWER COLUMNS B, C & D ALSO.

A	B	C	D
FREQUENCY	TIME CONSUMED (single performance the last time performed)	DO YOU FEEL YOU NEED ADDITIONAL TRAINING TO PER- FORM THIS TASK?	OPTIONAL (Additional instructions will be given if this column is used)

0=DID NOT DO LAST MONTH
1=DID LESS THAN 5 TIMES
2=DID 5 TO 20 TIMES
3=DID 21 TO 50 TIMES
4=DID 51 TO 100 TIMES
5=DID MORE THAN 100 TIMES

0=LESS THAN 1 MINUTE
1=1 TO 4 MINUTES
2=5 TO 10 MINUTES
3=11 TO 20 MINUTES
4=21 TO 30 MINUTES
5=31 TO 60 MINUTES
6=1 TO 2 HOURS
7=MORE THAN 2 HOURS

RESPONSE GUIDE

(DO NOT LOSE THIS TAB)

HOW TO RESPOND TO PART LIB - LIST OF INSTRUMENTS AND EQUIPMENT

ANSWER COL. A FIRST. IF A = 0, GO TO NEXT STATEMENT: IF A = 1-5, ANSWER COLUMNS B, C & D ALSO.

A

B

C

D

FREQUENCY

TIME CONSUMED
(last time used)

DO YOU FEEL YOU
NEED ADDITIONAL
TRAINING TO PER-
FORM THIS TASK?

OPTIONAL
INSTRUCTIONS
(Additional instructions
will be given if this
column is used)

0=DID NOT USE LAST MONTH
1=USED LESS THAN 5 TIMES
2=USED 5 TO 20 TIMES
3=USED 21 TO 50 TIMES
4=USED 51 TO 100 TIMES
5=USED MORE THAN 100 TIMES
0=LESS THAN 1 MINUTE
1=1 TO 4 MINUTES
2=5 TO 10 MINUTES
3=11 TO 20 MINUTES
4=21 TO 30 MINUTES
5=31 TO 60 MINUTES
6=1 TO 2 HOURS
7=MORE THAN 2 HOURS

Part II A
LIST OF TASKS

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 01
| OF RESPONSE BOOKLET

- 1 ASSIST PATIENT IN COLLECTING CLEAN CATCH URINE
- 2 COLLECT RADIOACTIVE SPECIMEN
- 3 COLLECT URINE SPECIMEN FROM INFANTS
- 4 COLLECT BLOOD FROM CHILDREN/INFANTS
- 5 COLLECT TIMED SPECIMENS, E.G. 24 HOUR URINE, BLOOD FOR GLUCOSE TOLERANCE
- 6 COLLECT BLOOD BY VENIPUNCTURE
- 7 COLLECT CAPILLARY BLOOD SAMPLE, I.E. FROM FINGER TIP, TOE OR EAR LOBE
- 8 COLLECT BLOOD BY ARTERIAL PUNCTURE
- 9 TAKE VAGINAL SMEAR FROM PATIENT
- 10 SCRAPE CERVICAL ORIFICE FOR PAP SMEAR SPECIMEN
- 11 ASPIRATE POSTERIOR FORNIX FOR PAP SMEAR SPECIMEN
- 12 COLLECT SPUTUM SPECIMEN BY SUCTION TRAP
- 13 TAKE NASAL/EAR/THROAT SPECIMEN BY STERILE SWAB
- 14 COLLECT THROAT/NOSE/EAR CAVITY SECRETIONS/SPECIMEN BY SUCTION TRAP
- 15 TAKE WOUND SPECIMEN FROM PATIENT
- 16 SCRAPE EYE ULCERS/CONJUNCTIVA FOR MICROBIOLOGICAL SPECIMENS
- 17 TAKE PUS SPECIMEN FROM PATIENT
- 18 TAKE SKIN SCRAPE SPECIMEN FROM PATIENT
- 19 PERFORM PUNCH BIOPSY OF SKIN
- 20 PERFORM WEDGE SECTION BIOPSY OF SKIN
- 21 COLLECT CORD BLOOD SAMPLES
- 22 ASPIRATE BONE MARROW
- 23 ASPIRATE GASTRIC SECRETION FOR ANALYSIS
- 24 ASPIRATE DUODENAL SECRETIONS FOR ANALYSIS
- 25 DO A SALINE WASH OF G.I. TRACT FOR CYTOLOGY STUDIES

1 TASK NO.	1 ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 01 OF RESPONSE BOOKLET
26	COLLECT RECTAL SPECIMENS USING STERILE SWAB
27	COLLECT HEEL PUNCH BLOOD SPECIMEN FOR PKU TESTING
28	CLIP FINGER/TOENAILS FOR PKU TESTING
29	PICK UP/DELIVER SPECIMENS
30	WASH/PREPARE GLASSWARE FOR LAB USE, INCLUDING SPECIAL PREPARATION, E.G. ACID WASH, SILICONE COAT
31	LABEL/ACCESSION SPECIMEN CONTAINERS, E.G. TUBES, SLIDES
32	TAKE PHOTOMICROGRAPHS OF SLIDE PREPARATIONS
33	MEASURE/DILUTE/PRESERVE LAB SPECIMEN E.G. URINE, BLOOD FOR SUBSEQUENT TESTING
34	LYOPHILIZE (FREEZE DRY) SPECIMENS FOR FUTURE TESTING
35	DO KOH PREPS OF FUNGAL/YEAST SPECIMEN
36	PREPARE/PRESERVE ROUTINE (NON-TISSUE) LAB SPECIMEN FOR SHIPMENT
37	PREPARE/PRESERVE TISSUE SPECIMEN FOR SHIPMENT
38	CALCULATE AND PREPARE PERCENT SOLUTIONS
39	CALCULATE AND PREPARE NORMAL/MOLAR SOLUTIONS
40	CALCULATE AND PREPARE MOLAL SOLUTIONS
41	CALCULATE MILLIEQUIVALENTS/MILLIMOLES
42	CALCULATE MOLAR/NORMAL CONCENTRATIONS OF REAGENTS FOR BUFFER PREPARATION
43	PREPARE BUFFER SOLUTIONS
44	PREPARE CHEMICAL STANDARDS
45	PREPARE DRY ICE USING CARBON DIOXIDE (CO ₂)
46	CHECK/ADJUST PH OF BUFFERS/REAGENTS
47	PREPARE STANDARD CURVE
48	STANDARDIZE REAGENTS
49	PREPARE CULTURE MEDIA FROM BASIC INGREDIENTS, E.G. BEEF EXTRACT
50	PREPARE CULTURE MEDIA USING COMMERCIALLY DEHYDRATED PRODUCT, E.G. MC CONKEY AGAR

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 02
| OF RESPONSE BOOKLET

- 1 STREAK CULTURE MEDIA
- 2 PREPARE ROUTINE STAINS
- 3 PREPARE SPECIAL STAINS
- 4 STAIN SMEARS TO DEMONSTRATE BACTERIA
- 5 STAIN SMEARS TO DEMONSTRATE CELL MORPHOLOGY
- 6 STAIN SMEARS TO DEMONSTRATE PARASITE
- 7 CENTRIFUGE URINE
- 8 CENTRIFUGE BLOOD AND SEPARATE SERUM OR PLASMA
- 9 CHECK SPECIFIC GRAVITY OF URINE
- 10 CHECK SPECIFIC GRAVITY OF CHEMICAL SOLUTIONS
- 11 DETERMINE SPERM COUNTS
- 12 EXAMINE SEMINAL FLUID FOR SPERM MORPHOLOGY
- 13 EXAMINE URETHRAL SMEARS FOR GONOCOCCUS
- 14 TEST FOR SYPHILLIS USING RPR CARD
- 15 PREPARE SMEARS FOR MICROSCOPIC ANALYSIS
- 16 PREPARE FECAL SMEAR
- 17 PREPARE URETHRAL SMEAR
- 18 DO SLIDE PREGNANCY TEST, E.G. GRAVINDEX
- 19 TEST FOR OCCULT BLOOD USING CHEMICAL SOLUTION E.G. GUAIAC
- 20 TEST FOR OCCULT BLOOD USING HEMATEST TABLETS
- 21 LOOK UP NORMAL VALUES FOR LABORATORY TESTS FROM REFERENCE TABLE/BOOK
- 22 USE LOG TABLES
- 23 CONVERT CENTIGRADE TEMPERATURE TO FAHRENHEIT OR VICE VERSA
- 24 PLOT READING/VALUES ON SEMILOG PAPER
- 25 PLOT READING/VALUES ON RECTILINEAR GRAPH PAPER

1	TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 02 OF RESPONSE BOOKLET
26		USE LOCALLY DEVELOPED MANUALS/GUIDES TO FOLLOW ANALYTICAL PROCEDURES
27		USE NAVY/DOD MANUALS TO STUDY ANALYTICAL PROCEDURES
28		USE COMMERCIAL MANUALS TO FOLLOW ANALYTICAL PROCEDURES
29		PREPARE ABSORPTION SPECTRAL CURVE OF REAGENTS/STANDARDS
30		MATCH CUVETTES OPTICALLY
31		DETERMINE FAT CONTENT OF MILK
32		DETERMINE CHLORINE CONTENT OF POTABLE WATER
33		DETERMINE PH AND CHLORINE CONTENT OF SWIMMING POOLS
34		TEST FOR FECAL FAT BY STAINING METHOD
35		DETERMINE FECAL FAT CONTENT BY ETHER OR ALCOHOL EXTRACTION METHOD
36		TEST FOR HEAVY (POISONOUS) METALS IN FOOD, WATER OR BEVERAGE
37		CHECK URINE PH BY PAPER STRIP/DIP STIK
38		CHECK URINE SUGAR BY DIP STIK/CLINITEST
39		CHECK URINE PROTEIN BY DIP STIK
40		EXAMINE URINE FOR CASTS /PUS/RBC
41		CHECK URINE FOR ACETONE/KETONE BODIES
42		CHECK URINE FOR PHENYLPYRUVIC ACID BY DIP STIK (PKU)
43		DO PKU DIAPER TEST
44		CHECK URINE FOR PRESENCE OF BILE
45		TEST URINE FOR BENCE-JONES PROTEIN
46		DETERMINE DYE EXCRETION, AS FOR PSP TEST
47		DETERMINE URINE CREATININE EXCRETION
48		DETERMINE UREA EXCRETION
49		SCREEN URINE FOR ALCOHOL
50		SCREEN URINE FOR DRUG OVERDOSE, E.G. BARBITURATES, SALICYLATES

TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 03
| OF RESPONSE BOOKLET

- 1 SCREEN URINE FOR METALLIC POISONING, E.G. LEAD, ARSENIC
- 2 SCREEN URINE FOR HALLUCINOGENIC DRUG USE, E.G. LSD, AMPHETAMINE
- 3 TEST FOR PORPHYRIN
- 4 TEST FOR HOMOGENTISIC ACID
- 5 TEST FOR CYSTINE
- 6 TEST FOR MELANIN
- 7 TEST FOR HEMOSIDERIN
- 8 TEST FOR MYOGLOBIN
- 9 DO URINE PROTEIN ELECTROPHORESIS
- 10 DETERMINE URINE PROTEIN BY REFRACTION
- 11 TEST FOR PENTOSE
- 12 TEST FOR LACTOSE
- 13 TEST FOR URINARY INDICAN
- 14 TEST FOR FAT IN URINE
- 15 DETERMINE URINE OSMOLARITY
- 16 DETERMINE 5HIAA IN URINE
- 17 DETERMINE XYLOSE EXCRETION
- 18 DETERMINE UROBILINogen IN URINE
- 19 DETERMINE URINE AMYLASE
- 20 DETERMINE URINE CALCIUM
- 21 DETERMINE URINE CHLORIDE
- 22 DETERMINE URINE SODIUM
- 23 DETERMINE URINE POTASSIUM
- 24 DETERMINE EXCRETION OF PHENOLS AND DERIVATIVES
- 25 DETERMINE EXCRETION OF CATECHOLAMINES

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 03
| OF RESPONSE BOOKLET

26 DETERMINE URINARY 17 KETOSTEROIDS

27 DETERMINE URINARY 17 HYDROXYCORTICOSTEROIDS

28 DETERMINE URINARY ALDOSTERONE

29 DETERMINE URINARY ESTROGEN DERIVATIVES, E.G. ESTRADIOL

30 DETERMINE URINARY PROGESTERONE DERIVATIVES, E.G. PREGNANETRIOL

31 CALCULATE KIDNEY CLEARANCE, EG. UREA, CREATININE, INULIN

32 MEASURE BLOOD GLUCOSE LEVEL BY DEXTROSTIK

33 CHECK BUN CONCENTRATION USING UROGRAPH STRIP

34 DETERMINE TOTAL PROTEIN BY REFRACTION

35 MEASURE BLOOD OR SERUM SPECIFIC GRAVITY

36 DETERMINE BLOOD PH

37 DO THYMOL TURBIDITY TEST

38 DO CEPHALIN-CHOLESTEROL FLOCCULATION TEST

39 DETERMINE DYE RETENTION IN PLASMA, E.G. BROMSULFALEIN TEST

40 PREPARE PROTEIN FREE FILTRATE

41 COLLECT BLOOD SAMPLES FOR DETERMINATION OF GASES

42 DETERMINE CO₂ CONTENT OF BLOOD/PLASMA

43 DETERMINE O₂ CONTENT OF BLOOD/PLASMA

44 DETERMINE CO CONTENT OF BLOOD/PLASMA

45 DETERMINE OXYGEN SATURATION USING OPTICAL DENSITY MEASUREMENTS

46 DO DIRECT MEASUREMENT OF BLOOD PO₂

47 DO DIRECT MEASUREMENT OF BLOOD PCO₂

48 CALCULATE PERCENT O₂ SATURATION OF BLOOD

49 CALCULATE ACID/BASE EXCESS/DEFICITS

50 CALCULATE PCO₂ USING A NOMOGRAM

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 04
| OF RESPONSE BOOKLET

- 1 | CALCULATE CO₂ CAPACITY OF PLASMA
- 2 | CALCULATE O₂ CAPACITY OF HEMOGLOBIN
- 3 | CALCULATE BLOOD VOLUMES FROM VALUES OBTAINED THROUGH DYE
| DILUTION STUDIES
- 4 | CALCULATE BLOOD VOLUMES FROM VALUES OBTAINED THROUGH
| RADIOISOTOPE STUDIES
- 5 | DETERMINE BICARBONATE CONCENTRATION
- 6 | DETERMINE CHLORIDE CONCENTRATION
- 7 | DETERMINE SODIUM CONCENTRATION
- 8 | DETERMINE POTASSIUM CONCENTRATION
- 9 | DETERMINE CALCIUM CONCENTRATION
- 10 | DETERMINE MAGNESTIUM CONCENTRATION
- 11 | DETERMINE INORGANIC PHOSPHATE CONCENTRATION
- 12 | DETERMINE PROTEIN BOUND IODINE CONCENTRATION
- 13 | DETERMINE IRON-BINDING CAPACITY
- 14 | DETERMINE BUN CONCENTRATION
- 15 | DETERMINE ALBUMIN CONCENTRATION
- 16 | DETERMINE TOTAL PROTEIN CONCENTRATION
- 17 | CALCULATE A/G RATIO
- 18 | DETERMINE CREATININE CONCENTRATION
- 19 | DETERMINE URIC ACID CONCENTRATION
- 20 | DETERMINE ALPHA-AMINO NITROGEN CONCENTRATION
- 21 | DETERMINE AMINO ACID PATTERN
- 22 | DETERMINE GLUCOSE CONCENTRATION
- 23 | PREPARE LAB REPORT OF RESULTS OF CARBOHYDRATE TOLERANCE TEST,
| EG. GLUCOSE, GALACTOSE
- 24 | DETERMINE TOTAL CHOLESTEROL CONCENTRATION
- 25 | DETERMINE TRIGLYCERIDE CONCENTRATION

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 04
| OF RESPONSE BOOKLET

26 DETERMINE PHOSPHOLIPID CONCENTRATION

27 DETERMINE TOTAL BILIRUBIN CONCENTRATION

28 DETERMINE ALKALINE PHOSPHATASE ACTIVITY

29 DETERMINE ACID PHOSPHATASE ACTIVITY

30 DETERMINE AMYLASE ACTIVITY

31 DETERMINE LIPASE ACTIVITY

32 DETERMINE GOT ACTIVITY

33 DETERMINE GPT ACTIVITY

34 DETERMINE LDH ACTIVITY

35 DETERMINE CHOLINESTERASE ACTIVITY

36 DETERMINE CPK ACTIVITY

37 DO ISOENZYME ASSAY USING GEL ELECTROPHORESIS

38 DETERMINE ALCOHOL CONCENTRATION

39 DETERMINE BARBITURATE CONCENTRATION

40 DETERMINE SALICYLATE CONCENTRATION

41 DETERMINE BROMIDE CONCENTRATION

42 HOMOGENIZE TISSUES FOR CHEMICAL ANALYSIS

43 DETERMINE ENZYME ACTIVITY OF TISSUES

44 DETERMINE CHLORIDE CONCENTRATION OF SPINAL FLUID

45 DETERMINE GLUCOSE CONCENTRATION OF SPINAL FLUID

46 DETERMINE PROTEIN CONCENTRATION OF SPINAL FLUID

47 DETERMINE FREE/TOTAL GASTRIC ACIDITY

48 DETERMINE PH OF GASTRIC JUICE

49 CALCULATE HCL CONCENTRATION OF GASTRIC JUICE

50 CALCULATE TOTAL HCL OUTPUT

1	TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 05 OF RESPONSE BOOKLET
1		MICROSCOPICALLY EXAMINE BILIARY DRAINAGE SEDIMENT FOR CHOLESTEROL CRYSTALS
2		MICROSCOPICALLY EXAMINE BILIARY DRAINAGE SEDIMENT FOR CALCIUM BILIRUBINATE PIGMENTS
3		MEASURE ABC BILE SECRETION FOR EVALUATION OF GALL BLADDER FUNCTION
4		ESTIMATE AMOUNT OF BILE PIGMENT IN BILIARY/PANCREATIC DRAINAGE
5		DETERMINE HC03 CONCENTRATION PANCREATIC DRAINAGE
6		DETERMINE PH OF BILIARY/PANCREATIC SECRETIONS
7		DETERMINE HEMOGLOBIN CONCENTRATION USING AUTOMATED ANALYSIS
8		DETERMINE HEMOGLOBIN CONCENTRATION USING CONVENTIONAL BENCH METHOD
9		CHECK HEMATOCRIT USING AUTOMATED ANALYSIS
10		CHECK HEMATOCRIT USING CONVENTIONAL BENCH METHOD
11		DO MICRO-HEMATOCRIT (NON-AUTOMATED METHOD)
12		DETERMINE WHITE BLOOD CELL COUNTS USING AUTOMATED ANALYSIS
13		DETERMINE WHITE BLOOD CELL COUNTS USING CONVENTIONAL BENCH METHOD
14		DETERMINE RED BLOOD CELL COUNTS USING AUTOMATED ANALYSIS
15		DETERMINE RED BLOOD CELL COUNTS USING CONVENTIONAL BENCH METHOD
16		DETERMINE RED CELL INDICES USING AUTOMATED ANALYSIS
17		DETERMINE RED CELL INDICES USING CONVENTIONAL BENCH METHOD
18		PREPARE BLOOD FILM ON SLIDE
19		PREPARE WHITE BLOOD COUNT SAMPLES FOR HEMOCYTOMETER COUNTING
20		DETERMINE DIFFERENTIAL BLOOD CELL COUNTS
21		DETERMINE PLATELET COUNT
22		DETERMINE RETICULOCYTE COUNT
23		DETERMINE TOTAL EOSINOPHILE COUNT
24		DETERMINE ERYTHROCYTE SEDIMENTATION RATE
25		DETERMINE PROTHROMBIN TIMES

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 05
| OF RESPONSE BOOKLET

26 DETERMINE PARTIAL THROMBOPLASTIN TIMES

27 DETERMINE CLOT RETRACTION TIME

28 DO THROMBOPLASTIN GENERATION TEST

29 DO PROTHROMBIN CONSUMPTION TEST

30 DO CLOTTING FACTOR ASSAY

31 TEST FOR FIBRINOLYSINS

32 DETERMINE COAGULATION (CLOTTING) TIME

33 DETERMINE BLEEDING TIME

34 DETERMINE CAPILLARY FRAGILITY BY RUMPLE-LEADS TOURNIQUET TEST

35 DO AUTO-HEMOLYSIS TEST

36 DO OSMOTIC FRAGILITY TEST

37 DO RED CELL ENZYMES DETERMINATION USING COMMERCIAL KIT

38 DO RED CELL ENZYMES DETERMINATION USING BENCH METHOD

39 DO LEUKOCYTE ALKALINE PHOSPHATASE DETERMINATION

40 TEST FOR MACROGLOBULINEMIA USING SIA WATER TEST

41 EVALUATE NASAL SMEARS FOR EOSINOPHILIA

42 DETERMINE MORPHOLOGICAL VARIATIONS OF BLOOD CELLS

43 DO SICKLE CELL EVALUATION

44 PREPARE SPECIMEN FOR HEINZ BODY EVALUATION

45 EVALUATE HEINZ BODY STAIN PREPARATION

46 PREPARE SPECIMEN FOR L.E. CELL EVALUATION

47 EVALUATE L.E. CELL PREPARATION

48 PREPARE SPECIMEN FOR PEROXIDASE STAIN EVALUATION

49 EVALUATE PEROXIDASE STAIN PREPARATION

50 PREPARE BONE MARROW SMEAR

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 06
| OF RESPONSE BOOKLET

- 1 EXAMINE BONE MARROW PREPARATIONS FOR RED CELL MORPHOLOGY
- 2 DETERMINE BODY FLUID CELL COUNTS
- 3 DETERMINE WBC COUNT OF SPINAL FLUID
- 4 SCREEN/PROCESS BLOOD DONORS
- 5 PREPARE DONORS ARM FOR PHLEBOTOMY
- 6 PERFORM PHLEBOTOMY
- 7 NUMBER TUBES AND UNITS FOR PROCESSING BLOOD
- 8 LABEL/STORE BLOOD ACCORDING TO GROUPING FACTORS
- 9 POOL PLASMA FROM EXPIRED BLOOD UNITS
- 10 DETERMINE ABO SLIDE GROUPING
- 11 DETERMINE ABO TUBE GROUPING
- 12 DETERMINE ABO REVERSE GROUPING
- 13 DETERMINE SUB-GROUPS OF A
- 14 DETERMINE CONFIRMATION OF O
- 15 DETERMINE NATURAL SERIAL DILUTION TITERS FOR ANTI-A AND ANTI-B
- 16 DETERMINE IMMUNE SERIAL DILUTION TITERS FOR ANTI-A AND ANTI-B
- 17 DETERMINE RHO TYPE USING SLIDE METHOD
- 18 DETERMINE RHO TYPE USING TUBE METHOD
- 19 DETERMINE DU TYPE
- 20 DETERMINE GENOTYPE
- 21 DO ANTIBODY SCREEN BY INDIRECT COOMBS
- 22 IDENTIFY ANTIBODIES
- 23 DO DIRECT COOMBS
- 24 DO ELUTION OF ANTIBODY
- 25 DO ABSORPTION OF COLD-REACTING AUTO-IMMUNE AGGLUTININS

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 06
| OF RESPONSE BOOKLET

26 | TEST FOR HAPTOGLOBIN

27 | RUN TESTS FOR LEUKO-AGGLUTININS

28 | DETERMINE RED CELL SURVIVAL BY DIFFERENTIAL AGGLUTINATION

29 | PREPARE PACKED RED BLOOD CELLS

30 | PREPARE SINGLE DONOR PLASMA FOR COMPONENT THERAPY

31 | PREPARE FRESH FROZEN PLASMA

32 | PREPARE PLATELET RICH PLASMA

33 | PREPARE PLATELET CONCENTRATE

34 | PREPARE LEUKOCYTE-POOR PACKED RED BLOOD CELLS

35 | PREPARE WASHED PACKED RED BLOOD CELLS

36 |

37 | PREPARE FROZEN BLOOD CELLS

38 | RECONSTITUTE FROZEN RED BLOOD CELLS

39 | PREPARE CORD BLOOD FOR DIRECT AND INDIRECT AHG TESTS

40 | DO ABO AND RH TYPING OF CORD BLOOD

41 | CROSMATCH BLOOD FOR TRANSFUSION

42 | EVALUATE PROSPECTIVE CANDIDATE FOR RHOGAM THERAPY

43 | PERFORM RHOGAM COMPATIBILITY TESTS

44 | INVESTIGATE TRANSFUSION REACTION

45 | INVESTIGATE CAUSE OF AUTO-IMMUNE HEMOLYTIC ANEMIA

46 | PERFORM PLASMAPHERESIS

47 | DO VDRL TEST, QUALITATIVE

48 | DO VDRL DETERMINATION, QUANTITATIVE

49 | DO FTA-ABS TEST FOR SYPHILLIS

50 | TEST FOR ANTI NUCLEAR FACTOR

TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 07
| OF RESPONSE BOOKLET

- 1 DO FEBRILE AGGLUTINATION TEST BY TUBE METHOD
- 2 DO FEBRILE AGGLUTINATION TEST BY SLIDE METHOD
- 3 DO COLD AGGLUTINATION TEST
- 4 DO HETEROPHILE PRESUMPTIVE AND DIFFERENTIAL ANTIBODY TEST
- 5 TEST FOR C-REACTIVE PROTEIN
- 6 TEST FOR RHEUMATOID FACTOR BY LATEX FIXATION
- 7 TEST FOR RHEUMATOID FACTOR BY MICROTITRATION, E.G. ROSE WAALER
- 8 TEST FOR INFECTIOUS MONO BY AGGLUTINATION
- 9 DO ASO FOR B HEMOLYTIC STREP
- 10 DO THYROID ANTIBODY AGGLUTINATION TEST
- 11 ISOLATE VIRUS BY TISSUE CULTURE
- 12 ISOLATE RICKETTSIA BY TISSUE CULTURE
- 13 DO COMPLEMENT FIXATION FOR VIRAL IDENTIFICATION
- 14 DO COMPLEMENT FIXATION FOR RICKETTSIAL IDENTIFICATION
- 15 DO COMPLEMENT FIXATION FOR FUNGAL IDENTIFICATION
- 16 DO HA/IHA/HI FOR VIRAL IDENTIFICATION
- 17 DO SEROLOGICAL TESTS FOR TOXOPLASMOSIS
- 18 DO SEROLOGICAL TESTS FOR AMOEBIASIS
- 19 DO SEROLOGICAL TESTS FOR MELIOIDOSIS
- 20 DO VIRAL TESTS FOR INFLUENZA
- 21 DO VIRAL TESTS FOR PARAINFLUENZA
- 22 DO VIRAL TESTS FOR MUMPS
- 23 DO VIRAL TESTS FOR HERPES
- 24 DO VIRAL TESTS FOR POLIO
- 25 DO VIRAL TESTS FOR RUBELLA

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 07
| OF RESPONSE BOOKLET

26 | DO VIRAL TESTS FOR CHICKEN POX

27 | PREPARE CONTROL SERUM FOR SEROLOGICAL STUDIES

28 | VERIFY STRENGTH OF ANTI-SERA

29 | TEST FOR THE PRESENCE OF BACTERIA IN BLOOD/SERUM/PLASMA

30 | TEST FOR THE PRESENCE OF BACTERIA IN URINE

31 | TEST FOR THE PRESENCE OF BACTERIA IN OTHER BODY SECRETIONS, E.G.
| NASAL, SPINAL

32 | TEST FOR THE PRESENCE OF BACTERIA IN TISSUE/CELLS

33 | CHECK FOR BACTERIAL PRESENCE IN URINE USING COMMERCIAL KIT

34 | CHECK FOR BACTERIAL PRESENCE IN URINE BY MICROSCOPIC EXAMINATION

35 | DO MOTILITY TEST FOR BACTERIAL DIFFERENTIATION

36 | RUN CITRATE/UREA/SUGAR CULTURE SERIES FOR BACTERIAL GENUS/
| SPECIES DIFFERENTIATION

37 | TEST FOR THE PRESENCE OF BACTERIAL TOXINS IN BLOOD/SERUM/PLASMA

38 | TEST FOR THE PRESENCE OF BACTERIAL TOXINS IN FOOD/MILK

39 | DO BACTERIAL COUNTS BY FILTRATION, E.G. MILLIPORE

40 | DO BACTERIAL COUNTS BY DILUTION

41 | DO BACTERIAL COUNTS BY CALIBRATED LOOP

42 | CONCENTRATE AND NEUTRALIZE SPECIMEN FOR TB TESTING

43 | CULTIVATE MYCOLOGY SPECIMENS FOR PRIMARY ISOLATION

44 | PRESERVE/FREEZE SPECIMENS FOR VIRAL ISOLATION

45 | PREPARE/PRESERVE MILK/WATER/FOOD SAMPLES FOR SHIPMENT

46 | PREPARE QUALITY CONTROL CULTURES

47 | TAKE SWAB CULTURES FROM HOSPITAL EQUIPMENT/FLOORS

48 | TAKE SWAB TEST SAMPLES FROM FOOD AND BEVERAGE OUTLET/CONTAINERS

49 | RUN CONTROL TESTS TO VALIDATE MEDIA

50 | IDENTIFY BACTERIA BY STAINING METHODS

1 TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 08
1 OF RESPONSE BOOKLET

- 1 IDENTIFY BACTERIA BY BASIC CULTURE TECHNIQUES
- 2 IDENTIFY BACTERIA BY ANAEROBIC METHODS
- 3 IDENTIFY ENTERIC BACTERIA USING BIOCHEMICAL FERMENTATION
- 4 IDENTIFY ENTERIC BACTERIA USING ANTISERA
- 5 IDENTIFY PATHOGENIC BACTERIA USING FLUORESCENT AB TECHNIC E.G. F-A
- 6 IDENTIFY PATHOGENIC BACTERIA USING PAPER STRIP TECHNIC E.G. PATHOTEC
- 7 IDENTIFY PATHOGENIC STREPTOCOCCI USING BACITRACIN DISKS E.G. A DISK
- 8 IDENTIFY PATHOGENIC ENTERIC BACTERIA USING R & B SYSTEM
- 9 DO COAGULASE TEST TO IDENTIFY PATHOGENIC STAPHYLOCOCCI
- 10 IDENTIFY HAEMOPHILUS USING X AND V FACTORS
- 11 IDENTIFY BACTERIAL TYPE BY PHAGE TYPING
- 12 SCREEN FOR AFB USING AFB STAIN
- 13 TEST FOR AFB USING FLUOROCHROME STAIN
- 14 TEST FOR AFB USING CULTURE TECHNIQUES
- 15 IDENTIFY/CONFIRM TB USING BIOCHEM/SEROLOGICAL TECHNIQUES
- 16 TEST FOR BACTERIAL TOXINS BY IN-VITRO METHODS
- 17 TEST FOR BACTERIAL TOXINS BY ANIMAL INNOCULATION
- 18 IDENTIFY MYCOLOGY CULTURE SPECIMENS
- 19 TEST FOR FUNGUS USING STAINING TECHNIQUES
- 20 TEST FOR FUNGUS USING CULTURE TECHNIQUES
- 21 TEST FOR FUNGUS USING UVL
- 22 IDENTIFY GROSS AND MICROSCOPIC CHARACTERISTICS OF FUNGI
- 23 IDENTIFY PATHOGENIC FUNGI USING BIOCHEMICAL/SEROLOGICAL TECHNIQUES
- 24 TEST FOR MYCOPLASMA/PPLO UTILIZING CULTURAL TECHNIQUES
- 25 TEST FOR MYCOPLASMA/PPLO UTILIZING COMPLEMENT FIXATION TECHNIQUES

TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 08
| OF RESPONSE BOOKLET

26 | PREPARE AUTOGENOUS VACCINES

27 | DO BACTERIAL ASSAY FOR VIT C

28 | DO BACTERIAL ASSAY FOR VIT D

29 | DO BACTERIAL ASSAY FOR VIT B12

30 | DO BACTERIAL ASSAY FOR FOLIC ACID

31 | RUN ANTIBIOTIC SENSITIVITY AGAINST AFB

32 | RUN ANTIBIOTIC SENSITIVITY AGAINST FUNGUS

33 | RUN ANTIBIOTIC DISK SENSITIVITY AGAINST BACTERIA

34 | RUN ANTIBIOTIC SENSITIVITY AGAINST BACTERIA BY KIRBY BAUER METHOD

35 | RUN ANTIBIOTIC SENSITIVITY AGAINST BACTERIA BY TUBE DILUTION METHOD

36 | INTERPRET ANTIBIOTIC SENSITIVITY BY ZONE-NO-ZONE METHOD

37 | INTERPRET ANTIBIOTIC SENSITIVITY WITH RESTRICTIONS ON ZONE SIZE

38 | RUN/INTERPRET GANTRISIN SENSITIVITY AGAINST BACTERIA

39 | INNOCULATE BACTERIA IN BROTH PRIOR TO PLATING SENSITIVITY

40 | DO A CULTURE TEST ON DRUGS SUSPECTED OF BACTERIAL CONTAMINATION

41 | DEPYROGENATE/STERILIZE CHEMICAL COMPOUNDS

42 | RUN BACTERIOLOGICAL TESTS ON SEWAGE

43 | DO BACTERIAL COUNTS ON HOSPITAL EQUIPMENT

44 | DO BACTERIAL COUNTS ON FOOD/MILK

45 | DO BACTERIAL COUNTS ON WATER

46 | DO BACTERIAL COUNTS ON ENVIRONMENTAL SAMPLE E.G. AIR, SOIL

47 | PREPARE STAINED SPECIMENS USING VITAL STAIN

48 | PREPARE STAINED SPECIMENS USING CELLULAR STAIN E.G. GRAM

49 | TAKE CULTURE SAMPLES OF AIR

50 | PREPARE STAINED SPECIMENS USING SPORE STAIN

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 09
| | OF RESPONSE BOOKLET

- 1 | PREPARE STAINED SPECIMENS USING FLAGELLAR STAIN
- 2 | PREPARE STAINED SPECIMENS USING CAPSULE STAIN
- 3 | DEMONSTRATE CAPSULE BY INDIA INK METHOD
- 4 | TAKE FOOD/WATER SAMPLE FOR BACTERIAL/PARASITE TESTING
- 5 | TAKE SAMPLES OF SEWER EFFLUENT FOR ANALYSIS
- 6 | COLLECT WATER SAMPLES FROM BEACH AND STREAM BATHING AREAS
- 7 | DO BUFFER-PRECIPITATION TEST FOR MALARIA
- 8 | DO MALARIOLOGY EXAMINATIONS USING THICK SMEAR
- 9 | DO MALARIOLOGY EXAMINATIONS USING THIN SMEAR
- 10 | DO MICROFILARIAL EXAMINATIONS USING THICK SMEAR
- 11 | DO MICROFILARIAL EXAMINATIONS USING THIN SMEAR
- 12 | EMULSIFY FECES FOR TESTING
- 13 | MICROSCOPICALLY EXAMINE BLOOD FOR PARASITES
- 14 | MICROSCOPICALLY EXAMINE FECES FOR OVA AND PARASITES
- 15 | MICROSCOPICALLY EXAMINE DOUDENAL DRAINAGE FOR OVA AND PARASITES
- 16 | IDENTIFY PARASITIC AND DISEASE CARRYING ARTHROPODS
- 17 | IDENTIFY CESTODES, NEMATODES, OR TREMATODES
- 18 | IDENTIFY AMOEBA
- 19 | IDENTIFY PROTOZOA
- 20 | COLLECT INSECT SPECIMENS
- 21 | IDENTIFY GENUS AND SPECIES OF INSECTS
- 22 | IDENTIFY GENUS AND SPECIES OF ANIMALS
- 23 | IDENTIFY PLAGUE BACILLUS IN FLEA SPECIMENS
- 24 | EMBED SPECIMENS IN CLEAR PLASTIC (ACRYLIC RESIN)
- 25 | PREPARE PERMANENT WET MOUNTS

1	TASK NO.	1 ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 09 1 OF RESPONSE BOOKLET
26		DO MOSQUITO DISSECTION TO DETERMINE INFECTION BY MALARIAL PARASITES
27		RECOVER OOCYST FROM INFECTED MOSQUITOES
28		RECOVER INTESTINAL PROTOZOA BY FLOTATION METHOD
29		RECOVER INTESTINAL PROTOZOA BY ETHER CONCENTRATION
30		PREPARE MIF
31		ASSIST PATHOLOGIST IN GROSSING SURGICAL SPECIMENS
32		ACCESSION GROSS SPECIMENS
33		SEPARATE (CENTRIFUGE/FILTER) CELLS FROM BODY FLUIDS FOR CYTOLOGIC EXAM
34		MAKE SMEARS OF CELLS FROM BODY FLUIDS FOR CYTOLOGIC EXAMINATION
35		PROCESS TISSUE WITH THE AUTOMATIC TISSUE PROCESSING MACHINE
36		DECALCIFY TISSUE
37		IMBED TISSUE
38		DO FIXATION OF TISSUE FOR SPECIAL STUDIES
39		STAIN TISSUE SECTION WITH ROUTINE STAINS
40		STAIN TISSUE SECTIONS WITH SPECIAL STAINS
41		MOUNT TISSUE SLIDES
42		PERFORM PIGMENT REMOVAL FROM TISSUE
43		RESTORE COLOR TO TISSUE FOR PHOTOGRAPHIC PURPOSES
44		ADMIT AND RELEASE REMAINS FROM THE MORGUE
45		PREPARE/PRESERVE CORPSE/BODY PARTS FOR SHIPMENT
46		PREPARE REMAINS FOR AUTOPSY
47		REMOVE BRAIN AT AUTOPSY
48		WEIGH AND RECORD BODY ORGANS DURING AUTOPSY
49		COLLECT BLOOD, TISSUE, BODY FLUIDS FOR BACTERIOLOGICAL AND VIRAL STUDIES DURING AUTOPSY
50		OPEN AND CLEAN G. I. TRACT DURING AUTOPSY

TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 10
OF RESPONSE BOOKLET

- 1 | EXTRACT SPINAL CORD DURING AUTOPSY
- 2 | PREPARE CELL BUTTONS FROM VARIOUS BODY FLUIDS
- 3 | CLOSE BODY CAVITY AFTER AUTOPSY
- 4 | DO FINGERPRINTING OF HUMAN REMAINS
- 5 | FIX ROUTINE AUTOPSY SPECIMENS
- 6 | PREPARE AUTOPSY INSTRUMENT TRAYS
- 7 | PREPARE MUSEUM SPECIMENS
- 8 | MAKE SMEARS FOR RABIES STUDIES
- 9 | PRESERVE ANIMAL BRAINS OR HEADS FOR RABIES STUDIES
- 10 | STAIN AND MOUNT FROZEN SECTION SPECIMENS
- 11 | PREPARE CARBOXYLENE
- 12 | MELT AND FILTER PARAFFIN
- 13 | PREPARE LUBRICATING COMPOUND FOR KNIFE SHARPENERS
- 14 | MAKE CONTAINERS FOR IMBEDDING TISSUE
- 15 | PREPARE MAYER'S EGG ALBUMIN
- 16 | PREPARE 10% NEUTRAL FORMALIN
- 17 | PREPARE SPECIAL FIXATIVES
- 18 | PREPARE HEMATOXYLIN AND EOSIN STAINS
- 19 | SET UP AND MAINTAIN STAINING PROCEDURE
- 20 | SCREEN PAP SMEAR
- 21 | DETERMINE CRYSTAL RESOLUTION OF SCINTILLATION COUNTERS
- 22 | PREPARE COLLIMATOR ISO-RESPONSE CURVE
- 23 | PREPARE RADIOACTIVE COUNTING STANDARDS
- 24 | PREPARE LARGE VOLUME RADIOACTIVE COUNTING STANDARDS
- 25 | DO T3 TEST USING COMMERCIAL KIT

1	TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 10 OF RESPONSE BOOKLET
26		DO T3 TEST USING CONVENTIONAL BENCH METHOD
27		DO T4 TEST USING COMMERCIAL KIT
28		DO T4 TEST USING CONVENTIONAL BENCH METHOD
29		DO RADIOISOTOPE DISTRIBUTION STUDIES IN ANIMALS
30		DETERMINE GLUCOSE CATABOLISM VIA THE PENTOSE PATHWAY (HMPI) USING GLUCOSE 14-C TRACER
31		REVIEW DOCTOR'S ORDERS AND INSTRUCTIONS WITH DOCTOR
32		MAKE SUGGESTION REGARDING NEED FOR DIAGNOSTIC TESTS
33		OBTAIN CLARIFICATION OF CONFLICTING DOCTOR'S ORDERS
34		ASCERTAIN IF PATIENT HAS BEEN PREPARED FOR TEST/TREATMENT PROCEDURE
35		ASK PATIENT/CHECK CHART FOR CONTRAINDICATION FOR TREATMENT, PROCEDURE, TEST
36		VERIFY IDENTIFICATION OF PATIENT, E.G. FOR TREATMENT, MEDICATIONS, EXAMINATION
37		RECEIVE PATIENTS ON ARRIVAL, I.E. INTRODUCE SELF, OBTAIN PATIENT'S NAME
38		ASSIST PATIENTS IN/OUT OF BED, EXAM OR O.R. TABLES
39		POSITION/HOLD PATIENT FOR EXAMINATION, TREATMENT, SURGERY
40		RESTRAIN/CONTROL CHILDREN FOR EXAMINATION/TREATMENT/TEST
41		MEASURE/WEIGH PATIENT OR PERSONNEL
42		CHECK PATIENTS TEMPERATURE
43		TAKE BLOOD PRESSURE
44		CHECK RADIAL (WRIST) PULSE
45		CHECK FEMORAL PULSE FOR PRESENCE AND QUALITY
46		CHECK PEDAL PULSE FOR PRESENCE AND QUALITY
47		DETERMINE APICAL PULSE RATE/RHYTHM WITH STETHESCOPE
48		TAKE BASAL METABOLIC RATE
49		RESTRAIN/CONTROL PATIENT PHYSICALLY, E.G. ARM HOLD
50		RESTRAIN/CONTROL PATIENT VERBALLY

1	ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 11 OF RESPONSE BOOKLET
1	TRANSPORT NON AMBULATORY PATIENT TO OTHER DEPARTMENTS/CLINICS
2	ACCOMPANY PATIENT TO OTHER DEPARTMENTS/CLINICS
3	INFORM PATIENT OF PROCEDURES REQUIRED PRIOR TO/DURING EXAMINATION/TEST/TREATMENT
4	EXPLAIN/ANSWER PATIENT'S QUESTIONS REGARDING EXAMINATION/TEST/TREATMENT PROCEDURES
5	EXPLAIN/ANSWER QUESTIONS ABOUT DOCTOR'S INSTRUCTIONS TO PATIENT/FAMILY
6	REVIEW WITH PATIENT PRINTED INSTRUCTIONS FOR EXAMINATION/THERAPY PROCEDURES
7	WRITE STANDARD INSTRUCTIONS FOR PATIENT CONCERNING EXAMINATIONS/THERAPY OR PROCEDURES
8	INSTRUCT OR HELP PATIENT/FAMILY FILL OUT FORMS
9	ASK/INSTRUCT PATIENT TO COLLECT SPECIMEN
10	CHECK WITH PATIENT TO ENSURE THAT HE HAS COLLECTED SPECIMEN AS INSTRUCTED
11	ADMINISTER ORAL MEDICATION
12	ADMINISTER MEDICATION BY INTRAMUSCULAR INJECTION
13	ADMINISTER INTRADERMAL INJECTION
14	ADMINISTER I.V. MEDICATION DIRECTLY INTO VEIN
15	ADMINISTER MEDICATION BY SUBCUTANEOUS INJECTION
16	TERMINATE INTRAVENOUS DYE FLOW AND REMOVE INJECTOR
17	OBSERVE/RECORD PATIENT'S PHYSICAL/EMOTIONAL RESPONSE TO TREATMENT/DIAGNOSTIC PROCEDURES
18	OBSERVE/REPORT SYMPTOMS OF SIDE EFFECTS TO TREATMENT/MEDICATION
19	TEST FOR ALLERGIC RESPONSE TO A SPECIFIC AGENT, E.G. DYE/DRUG
20	REASSURE/CALM APPREHENSIVE (ANXIOUS) PATIENT
21	REASSURE APPREHENSIVE PARENTS OF PEDIATRIC PATIENT
22	REASSURE/CALM CHILDREN FOR EXAMINATION OR TREATMENT
23	MODIFY OR WRITE NEW TECHNICAL PROCEDURES
24	INITIATE NEW OR CHANGED TECHNICAL PROCEDURES
25	CONSULT WITH STAFF TO DESIGN/AMEND/UPDATE PROCEDURES /TECHNIQUES

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 11
| OF RESPONSE BOOKLET

26 | CALCULATE LAB/DIAGNOSTIC TEST RESULTS

27 | CHECK/CORRECT CALCULATIONS PERFORMED BY OTHER TECHNICIANS

28 | PREPARE LAB REPORT OF RESULTS OF ROUTINE URINALYSIS

29 | WEIGH/MEASURE CHEMICALS

30 | CHECK WEIGHING/MEASUREMENTS DONE BY OTHER TECHNICIANS

31 | CALCULATE DOSAGE OF DIAGNOSTIC PHARMACEUTICAL, E.G. BSP DYE

32 | DILUTE OR MIX POWDERED MEDICATIONS

33 | PREPARE RADIOPHARMACEUTICAL FOR I.V. INJECTION

34 | ORDER STOCK MEDICATIONS FROM PHARMACY

35 | ORDER DRUGS LISTED IN FEDERAL SUPPLY CATALOGUE

36 | SCHEDULE APPOINTMENTS FOR CLINIC/DEPARTMENT, E.G., MAINTAIN APPOINTMENT BOOK

37 | LOG ANALYSIS RESULTS

38 | LOG SPECIMENS RECEIVED

39 | MAINTAIN DAILY RECORDS ON PATIENT PROCEDURES/EXAMINATIONS PERFORMED

40 | MAINTAIN LOG OF QUALITY CONTROL PROCEDURES

41 | ASSESS ACCURACY OF ANALYSIS PERFORMED BY OTHER LABORATORIES

42 | ASSESS COMPLETENESS OF LABORATORY REPORTS

43 | MAINTAIN SUPPLY LEVEL OF IN-DATED ANTI-SERAS

44 | MAINTAIN TRANSFUSION FILE

45 | MAINTAIN DONOR FILES

46 | MAINTAIN PROBLEM CROSS-MATCH FILE

47 | MAINTAIN TICKLER FILE FOR SERUM DISPOSAL

48 | IDENTIFY PATIENT FOR COMPATABILITY TESTING

49 | MAINTAIN COMPONENT THERAPY LOG

50 | MAINTAIN TEMPERATURE LOG FOR CRYOPRECIPITATES

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 12
| OF RESPONSE BOOKLET

- 1 | MAINTAIN TEMPERATURE LOG OF BLOOD BANK REFRIGERATOR
- 2 | MAINTAIN TEMPERATURE LOG FOR FROZEN BLOOD
- 3 | MAINTAIN BLOOD PROCESSING RECORDS
- 4 | INVENTORY STOCK BLOOD
- 5 | MAINTAIN TIME CONTROL OF ANTI-SERA
- 6 | RELEASE BLOOD ON HOLD AND RETURN TO STOCK SUPPLY
- 7 | MAINTAIN STOCK OF BLOOD/BLOOD COMPONENTS WITHIN PRESCRIBED TIME LIMITS
- 8 | LOG MONTHLY USAGE OF BLOOD FOR RED CROSS
- 9 | ARRANGE FOR BLOOD EXCHANGE PROGRAMS BETWEEN HOSPITALS
- 10 | MONITOR EXPIRATION DATED PHARMACEUTICALS
- 11 | PREPARE AND MAINTAIN ANTIDOTE SECTION/LOCKER
- 12 | SAFEGUARD POISONS
- 13 | MAKE ENTRIES ON NAVMED 6710/1 (NARCOTIC AND CONTROLLED DRUG ACCOUNT RECORD)
- 14 | CHECK/COUNT NARCOTICS/CONTROLLED DRUGS
- 15 | INVESTIGATE/REPORT ON INJURIES/INCIDENTS TO PATIENTS/STAFF/VISITORS
- 16 | COMPLETE POISON REPORT
- 17 | DISPOSE OF HAZARDOUS MATERIAL E.G. CULTURES/ ACIDS
- 18 | CHECK EQUIPMENT FOR ELECTRICAL HAZARDS AND GROUNDS
- 19 | CHECK COMPRESSED GAS TANKS FOR LEAK, E.G. OXYGEN
- 20 | DO PERIODIC MECHANICAL SAFETY CHECKS ON POWER OPERATED EQUIPMENT
- 21 | ENFORCE ACCIDENT PREVENTION MEASURES
- 22 | REQUEST SPECIFIC LAB TEST/PHYSICALS FOR PERSONNEL EXPOSED TO TOXIC GASES/FUMES
- 23 | READ EQUIPMENT MANUALS FOR OPERATION AND MAINTENANCE OF EQUIPMENT
- 24 | RUN TEST STANDARD TO CHECK ACCURACY OF EQUIPMENT
- 25 | CALIBRATE EQUIPMENT

1	TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 12 OF RESPONSE BOOKLET
26		DO MINOR REPAIR ON EQUIPMENT
27		SUPERVISE ROUTINE EQUIPMENT MAINTENANCE FOR SECTION/UNIT
28		PREPARE SCHEDULE FOR CONTRACT PREVENTIVE MAINTENANCE
29		PREPARE PAPERWORK FOR EQUIPMENT REPAIR/MAINTENANCE
30		ARRANGE FOR REPLACEMENT/REPAIR OF EQUIPMENT AS REQUIRED
31		COORDINATE WITH MANUFACTURERS/CONTRACTORS FOR EQUIPMENT REPAIR/MAINTENANCE
32		MAINTAIN INVENTORY/STOCK OF EQUIPMENT/FURNITURE
33		SURVEY EQUIPMENT TO DETERMINE CONTINUED SERVICEABILITY/USABILITY
34		EVALUATE THE MAINTENANCE AND USE OF SUPPLIES, EQUIPMENT AND WORK SPACE
35		DETERMINE SUPPLIES AND EQUIPMENT BUDGET
36		CONFER/VISIT MANUFACTURERS/CONTRACTORS TO OBTAIN FIRST HAND KNOWLEDGE OF EQUIPMENT/SUPPLIES
37		ORDER SUPPLIES/EQUIPMENT THROUGH FEDERAL SUPPLY SYSTEM
38		SUPERVISE/DIRECT UNIT'S OJT PROGRAM
39		PLAN CONTENT FOR OJT PROGRAM
40		SCHEDULE LECTURES
41		DESIGN TRAINING AIDS, ILLUSTRATIONS, GRAPHICS
42		SELECT CLINICAL MATERIAL FOR INSTRUCTIONAL PURPOSES, E.G. PATIENTS,CASE STUDIES
43		EVALUATE/SELECT AUDIOVISUAL MATERIALS,E.G. FILMS
44		CONDUCT SEMINARS
45		PLAN CONFERENCES FOR STUDENTS DURING PRACTICAL TRAINING
46		TEACH FORMAL CLASSES
47		ADMINISTER EXAMINATIONS
48		COMPUTE TEST GRADES
49		DEMONSTRATE CLINICAL PROCEDURES USING PATIENT/SUBJECT
50		SELECT WORK EXPERIENCES FOR STUDENT/TRAINEE

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 13
| OF RESPONSE BOOKLET

- 1 | EVALUATE STUDENTS PERFORMANCE/PROGRESS
- 2 | COORDINATE WITH SUPERVISORS/INSTRUCTORS ON STUDENT TRAINING
- 3 | DESIGN SPECIAL RESEARCH EQUIPMENT/DEVICES
- 4 | BUILD SPECIAL EQUIPMENT/DEVICES FOR RESEARCH
- 5 | CALCULATE DOSAGES FOR PRESCRIBED EXPERIMENTS
- 6 | RECORD/MAINTAIN RECORDS OF EXPERIMENTAL FINDINGS/TESTS
- 7 | CONDUCT RESEARCH LITERATURE SEARCH/SURVEY
- 8 | CALCULATE MEANS, STANDARD DEVIATIONS
- 9 | PERFORM CALCULATIONS FOR ANALYSIS OF VARIANCE, CORRELATIONS, OR RELIABILITY MEASURES
- 10 | MAINTAIN ANIMAL COLONY
- 11 | MAINTAIN AN INSECTORY
- 12 | ACT AS OBSERVER OF EXPERIMENTAL SUBJECTS/ANIMALS
- 13 | OPERATE/CONTROL EQUIPMENT FOR EXPERIMENTAL TESTS
- 14 | CALIBRATE/TEST EXPERIMENTAL EQUIPMENT/APPARATUS
- 15 | SELECT EXPERIMENTAL SUBJECTS/ANIMALS
- 16 | WRITE RESEARCH PROGRESS REPORTS
- 17 | WRITE TECHNICAL PAPERS/REPORTS FOR PUBLICATION
- 18 | PARTICIPATE/PRESENT PAPERS AT SCIENTIFIC/PROFESSIONAL MEETINGS
- 19 | COMPILE EXPERIMENTAL DATA FOR REPORTS
- 20 | WRITE CORRESPONDENCE ON RESEARCH MATTERS
- 21 | PROVIDE CONSULTATION ON RESEARCH DESIGN
- 22 | CONSULT WITH STATISTICIAN/OTHERS ON RESEARCH DESIGN/ANALYSIS
- 23 | COORDINATE OWN RESEARCH PROGRAMS WITH OTHER NAVY COMMANDS
- 24 | DESIGN/PREPARE DATA FOR COMPUTER PROCESSING
- 25 | LAYOUT/DESIGN RESEARCH FACILITIES/SPACES

1	TASK NO.	ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 13 OF RESPONSE BOOKLET
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26	EVALUATE NEW CHEMICAL PRODUCTS
27	POSITION RESEARCH ANIMAL FOR SURGERY
28	DRAPE RESEARCH ANIMAL FOR SURGERY
29	ADMINISTER INTRAMUSCULAR MEDICATION TO RESEARCH ANIMAL
30	ADMINISTER INTRAPERITONEAL MEDICATION TO RESEARCH ANIMAL
31	ADMINISTER INTRACARDIAC MEDICATION TO RESEARCH ANIMAL
32	PREPARE OPERATIVE SITE OF RESEARCH ANIMAL

Part II B

LIST OF INSTRUMENTS AND EQUIPMENT

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 14
| OF RESPONSE BOOKLET

- 1 CLINICAL WEIGHT AND HEIGHT SCALES
- 2 BASAL METABOLISM RATE MACHINE
- 3 STETHOSCOPE
- 4 SPHYGMOMANOMETER (BLOOD PRESSURE APPARATUS)
- 5 VACUTAINER BLOOD COLLECTING SYSTEM
- 6 SYRINGE/NEEDLES
- 7 GLASS SLIDES/COVERS/COUNTING CHAMBERS
- 8 THERMOMETER LABORATORY
- 9 THERMOMETER, CLINICAL
- 10 AUTOMATIC PIPETTING MACHINE
- 11 MICROPIPETTE
- 12 PIPET
- 13 PIPET FILLER (RUBBER BULB)
- 14 VOLUMETRIC GLASSWARE (OTHER THAN BURETS AND PIPETS)
- 15 GLASS WASHER/DRYER
- 16 AUTOCLAVE, DRY HEAT
- 17 AUTOCLAVE, GAS
- 18 AUTOCLAVE, STEAM
- 19 ULTRASONIC CLEANER
- 20 NEEDLE WASHER
- 21 WATER DEMINERALIZER
- 22 DISTILLING APPARATUS, WATER
- 23 MICROFILTRATION SYSTEM
- 24 BURET, MICRO
- 25 BURETTE, MACRO

1 TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 14
1 OF RESPONSE BOOKLET

26 AUTOMATIC BURETTES
27 PHOTOMETRIC TITRATOR
28 PH METER
29 APPARATUS FOR BLOOD PH DETERMINATION
30 COLOR COMPARATOR
31 COLORIMETER, E.G. KLETT
32 SPECTROPHOTOMETER, NONRECORDING, E.G. COLEMAN
33 SPECTROPHOTOMETER, AUTO-RECORDING, E.G. DK-2
34 SPECTROPHOTOFLUORIMETER
35 REFRACTOMETER
36 URINOMETER
37 OSMOMETER
38 FLUORIMETER
39 TURBIDIMETER
40 CHLORIDIMETER
41 FLAME PHOTOMETER
42 SPENCER HEMOGLOBINOMETER
43 HEMOPHOTOMETER
44 HEMOCYTOMETER
45 AUTOCYTOMETER
46 AUTOMATIC TISSUE PROCESSOR
47 AUTOMATIC SAMPLE CHANGER
48 AUTO-ANALYZER, SINGLE OR DUAL CHANNEL
49 SEQUENTIAL MULTIPLE ANALYZER 4 CHANNEL
50 SEQUENTIAL MULTIPLE ANALYZER 12 CHANNEL

TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 15
| OF RESPONSE BOOKLET

- 1 STRIP CHART RECORDER
- 2 XY PLOTTER
- 3 DENSITOMETER WITH WRITER/RECORDER
- 4 POLYGRAPH RECORDER
- 5 MANOMETRIC GAS ANALYZER, E.G. VAN SLYKE, WARBURG
- 6 MICRO-ASTRUP APPARATUS FOR BLOOD PO2 ANALYSIS
- 7 CORNING BLOOD GAS ANALYZER
- 8 RADIOMETER GAS ANALYZER
- 9 IL BLOOD GAS ANALYZER
- 10 CO2 ANALYZER
- 11 NITROGEN ANALYZER
- 12 O2 PERCENT ANALYZER
- 13 SCHOLANDER MICRO GAS ANALYSER
- 14 CRYSTAL SCINTILLATION COUNTER, SINGLE CHANNEL ANALYZER
- 15 CRYSTAL SCINTILLATION COUNTER, MULTI CHANNEL ANALYZER
- 16 AUTOMATED HEMATOLOGY ANALYZER E.G. COULTER S
- 17 AUTOMATED CELL COUNTER
- 18 COLONY COUNTER
- 19 PAPER CHROMATOGRAPHY APPARATUS
- 20 COLUMN CHROMATOGRAPHY APPARATUS
- 21 THIN LAYER CHROMATOGRAPHY APPARATUS
- 22 GAS CHROMATOGRAPH
- 23 FLOW METER
- 24 GEL ELECTROPHORESIS APPARATUS
- 25 PAPER ELECTROPHORESIS APPARATUS

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 15
| OF RESPONSE BOOKLET

26	LABORATORY MICROSCOPE (LIGHT)
27	DARKFIELD CONDENSOR
28	WHITEFIELD CONDENSOR
29	STEREO MICROSCOPE
30	ULTRAVIOLET MICROSCOPE
31	ELECTRON MICROSCOPE
32	DISSECTING MICROSCOPE
33	PHOTOGRAPHIC MICROSCOPE
34	PHASE ILLUMINATION MICROSCOPE
35	CENTRIFUGE, REFRIGERATED
36	CENTRIFUGE, CLINICAL (TABLE MODEL)
37	CENTRIFUGE, LABORATORY (FLOOR MODEL)
38	ULTRACENTRIFUGE
39	HEMOFUGE
40	SERO-FUGE
41	HEMATOCRIT READER
42	MICRO HEMATOCRIT CENTRIFUGE AND READER
43	CYTOGLOMERATOR
44	PLASMA EXTRACTOR
45	RH TYPING BOX
46	DIRECT READ-OUT BALANCE, E.G. METTLER
47	ANALYTICAL BALANCE
48	TRIP BALANCE
49	MELTING POINT APPARATUS
50	WATER BATH WITH THERMOSTAT

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 16
| | OF RESPONSE BOOKLET

1	SAND BATH
2	TISSUE WATER FLOAT BATH
3	BATH COOLER (CRYOS)
4	ANAEROBIC INCUBATOR
5	CO ₂ INCUBATOR
6	INCUBATORS LABORATORY
7	DESSICATOR
8	FURNACE (FOR ASHING)
9	DRYING OVEN
10	BLOOD REFRIGERATOR
11	FREEZER
12	FREEZER, PLASMA STORAGE
13	TIMER, LABORATORY
14	COAGULATION TIMER, PHOTOMETRIC DETECTION OF END POINT
15	COAGULATION TIMER, MECHANICAL DETECTION OF END POINT
16	STOP WATCH
17	CALIPER
18	DISSECTING INSTRUMENTS
19	AUTOPSY INSTRUMENTS
20	MORGUE BODY HOIST
21	MICROTOME, SLIDING
22	MICROTOME, FREEZING
23	MICROTOME, ROTARY
24	MICROTOME KNIFE SHARPENER
25	TISSUE GRINDER

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 16
| | OF RESPONSE BOOKLET

26 ELECTRIC TISSUE KNIFE
27 LYOPHILIZER AND ASSOCIATED EQUIPMENT
28 SLIDE ROTATOR (VORL)
29 FLASK SHAKER
30 TUBE AGITATOR/MIXER/SHAKER
31 AIR COMPRESSOR
32 SUCTION/VACUUM PUMP
33 SUCTION FUNNEL
34 LIGHT, ULTRAVIOLET, SPECIMEN EXAMINING
35 GAS BURNERS, E.G. BUNSEN
36 LABORATORY STIRRER-HOT PLATE
37 COMPRESSED GAS TANKS/CYLINDERS (OTHER THAN OXYGEN)
38 OXYGEN CYLINDER/TANK, PORTABLE
39 CHEMICAL FUME HOOD
40 BACTERIOLOGICAL HOOD
41 MYCOLOGY ISOLATION HOOD
42 VIROLOGY ISOLATION ROOM
43 FOGGING, APPARATUS, BIOLOGICAL
44 FIRE EXTINGUISHER
45 NUMBERING MACHINE
46 SLIDE RULE
47 ELECTRIC DESK CALCULATOR
48 TYPEWRITER
49 SLIDE/FILM STRIP/STILL PROJECTOR
50 MOVIE PROJECTOR/ACCESSORIES

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 17
| OF RESPONSE BOOKLET

1	WATER TESTING KIT (POISON)
2	MILK TESTING KIT
3	WATER TESTING KIT
4	FOOD TESTING KIT
5	BLOOD TESTING KITS
6	FIRST AID KIT
7	MID-STREAM URINE KIT
8	BIOLOGICAL IDENTIFICATION KEYS (ANIMAL)
9	BIOLOGICAL IDENTIFICATION KEYS (PLANT)

1 TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN RIGHT SIDE OF PAGE 15
OF RESPONSE BOOKLET

26 LABORATORY MICROSCOPE (LIGHT)

27 DARKFIELD CONDENSOR

28 WHITEFIELD CONDENSOR

29 STEREO MICROSCOPE

30 ULTRAVIOLET MICROSCOPE

31 ELECTRON MICROSCOPE

32 DISSECTING MICROSCOPE

33 PHOTOGRAPHIC MICROSCOPE

34 PHASE ILLUMINATION MICROSCOPE

35 CENTRIFUGE, REFRIGERATED

36 CENTRIFUGE, CLINICAL (TABLE MODEL)

37 CENTRIFUGE, LABORATORY (FLOOR MODEL)

38 ULTRACENTRIFUGE

39 HEMOFUGE

40 SERO-FUGE

41 HEMATOCRIT READER

42 MICRO HEMATOCRIT CENTRIFUGE AND READER

43 CYTOGLOMERATOR

44 PLASMA EXTRACTOR

45 RH TYPING BOX

46 DIRECT READ-OUT BALANCE, E.G. METTLER

47 ANALYTICAL BALANCE

48 TRIP BALANCE

49 MELTING POINT APPARATUS

50 WATER BATH WITH THERMOSTAT

| TASK NO. | ENTER RESPONSES TO STATEMENTS BELOW IN LEFT SIDE OF PAGE 16
| OF RESPONSE BOOKLET

1	SAND BATH
2	TISSUE WATER FLOAT BATH
3	BATH COOLER (CRYOS)
4	ANAEROBIC INCUBATOR
5	CO ₂ INCUBATOR
6	INCUBATORS LABORATORY
7	DESSICATOR
8	FURNACE (FOR ASHING)
9	DRYING OVEN
10	BLOOD REFRIGERATOR
11	FREEZER
12	FREEZER, PLASMA STORAGE
13	TIMER, LABORATORY
14	COAGULATION TIMER, PHOTOMETRIC DETECTION OF END POINT
15	COAGULATION TIMER, MECHANICAL DETECTION OF END POINT
16	STOP WATCH
17	CALIPER
18	DISSECTING INSTRUMENTS
19	AUTOPSY INSTRUMENTS
20	MORGUE BODY HOIST
21	MICROTOME, SLIDING
22	MICROTOME, FREEZING
23	MICROTOME, ROTARY
24	MICROTOME KNIFE SHARPENER
25	TISSUE GRINDER